

## D4.3 Potential, contexts and approaches for application of the From5To4 game

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# MOBI

**PROMOTING  
SMART  
MOBILITY  
TO  
EMPLOYEES**

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## Summary: what is the potential of From5To4 in each context?

From5To4 was applied in different countries and distinct contexts throughout the MOBI project. The experiences collected show that it has a potential to capture the interest of organisations and players and to truly trigger behaviour change. The most differentiating elements of From5To4 are possibly the gaming element, the image projected by the Mobi character and, since the experiences carried out in the MOBI project, the proven effectiveness of the approach in achieving engagement and behaviour change among the participant individuals. The element which has so far been identified as the most relevant difficulty associated with the approach is to obtain the initial engagement of individuals and teams. For games that extend over long periods of time (more than four months), keeping up the motivation of the players can also be a challenge.

*What is the concrete potential of From5To4?* In the MOBI games, it managed to trigger an increase of 39% in the usage of sustainable modes in trips of participant employees to work. Car split among players reduced from 44% to 26%. According to the final questionnaire given to players weeks after the end of the game, this change seems to be enduring, i.e. most individuals who change their behaviour during the game change it for good. This change translates into concrete environmental, health, congestion and economic positive impacts for society and the participant organisations and individuals, which may to some extent be quantified.

*But does From5To4 work in any context?* Considering the diversity of local situations in MOBI, the potential seems to hold in significantly different contexts. However the relevant selling points of From5To4, and the expected results, differ from case to case. For increasing the probability of success in the engagement of organisations and individual players, the relevant aspects of their context should be recognized in order to devise an appropriate approach. Considering the accumulated experience, some aspects of particular importance were identified and related implications and strategies are discussed in this document, in particular the contextual elements of *type of organisation, stage of the organisation at promoting smart mobility, specific needs of the organisation, size of the organisation, transport and accessibility supply, cultural aspects and enthusiasm and charisma of responsible staff* are identified and discussed.

*How can the likeliness of success be improved, considered these contextual elements?* Each case is different and the adequate approach should be tailored to each situation, considering the composition of the various elements. As an example and characterisation of different situations, four typical scenarios – *Socially responsible consumer oriented company, Industrial and car oriented company, Public authority and Enthusiastic ambassador in low green culture* – are presented in the end of the document and possible adequate strategies are discussed considering the most relevant selling points, expectation of results and institutional approaches.

*Is the country where From5To4 is applied a crucial factor for deciding the approach?* Only to limited extent. Countries or regions may have distinctive cultural characteristics (social significance of the car and other modes, 'green' mindedness...) and sustainable mobility supply which are relevant. However, even these change significantly inside a country depending on the location and characteristics of the organisation, and furthermore other elements are relevant which are not essentially correlated to country but rather local and organisational characteristics.



# 1 Scope and objectives

This document systematizes the results achieved in the previous tasks of the MOBI project (*Promoting Smart Mobility to Employees*) with a focus on the engagement of new sites and member states. It enables follower sites in already participating and other member states to better understand the MOBI concept in their own mobility context and to define strategies for a successful implementation of the From5To4 game.

The document is divided in three parts:

- A description of the potential of From5To4 to bring benefits to society, organisations and individuals, considering the evidence of results obtained in MOBI
- A discussion on relevant elements of context which should be taken into account in devising an approach to engage organisations and users
- A description of four typical scenarios and possible approaches in their own contexts. As further concrete examples of site contexts and the approaches followed locally, a case of application in each MOBI country considering its specificities is described in Annex I.



## 2 The potential of From5To4

From5To4 is a mobility game that encourages employees to choose a more sustainable mode for their daily commute. It is based on individual and team competition and it allows users to evaluate their own progress over the weeks. The game provides a fun way to induce behaviour change, where the team dynamics works as an important motivator, providing a context for social interactions that might not occur otherwise. Adopting the game helps companies improving their internal and external image. Since the game has tangible and observable results, it can work as a powerful tool for external communication. It also delivers the direct and indirect benefits to the organisation that come from the reduction of car trips: lower parking space requirements and costs, more healthy employees and lower mobility related costs including congestion. From5To4 can also be used to get to know obtain information on the employees' mobility patterns and help identify shortcomings and opportunities for improvement. From5To4 may be used to help develop or complement a company's mobility plan, both through additional information and by capitalizing on other implemented measures.

Previous editions of From5To4 have had very satisfying results. The game has been played in the Netherlands, Romania, Portugal, Belgium, Bulgaria and the UK. The games had different lengths, varying from 4 weeks to 21 weeks. Some of the games had a small number of players, while the editions at Joker (Belgium) and Transylvania University (Romania) had more than 80 active players. As of February 2016, over 900 people have played From5To4 and over 73.000 trips have been registered within the game.

Overall the use of all sustainable modes among From5To4 players increased 39% during the game. Car split reduced from 44% to 26%. The final questionnaire, presented one or two months after the end of the game, shows that this sustainable behaviour has been kept by most players; 68% of players said weeks after the end of the game that they had increased the utilisation of some form of sustainable transport for good. On average, these particular respondents declared to have persistently changed their travel choice on 2.4 days of week on average. Furthermore, the opinion on the quality of sustainable transport modes improved for an average of 29% of the players, while their opinion on the car got worse by 39% of the respondents. There has been an improvement even for companies with poor public transport access and a high rate of private car use: in the game played by Nokia, in Portugal, the share of private car reduced from 61% to 35% and in the game played by CapGemini, in the Netherlands, the rate went from 69% to 50%. Companies and players alike considered the game a worthwhile experience with visible results. About 76% of the participating players filled in at least 50% of the trips during the whole game period. 91% of the final questionnaire respondents stated they would recommend the game to other companies and players.



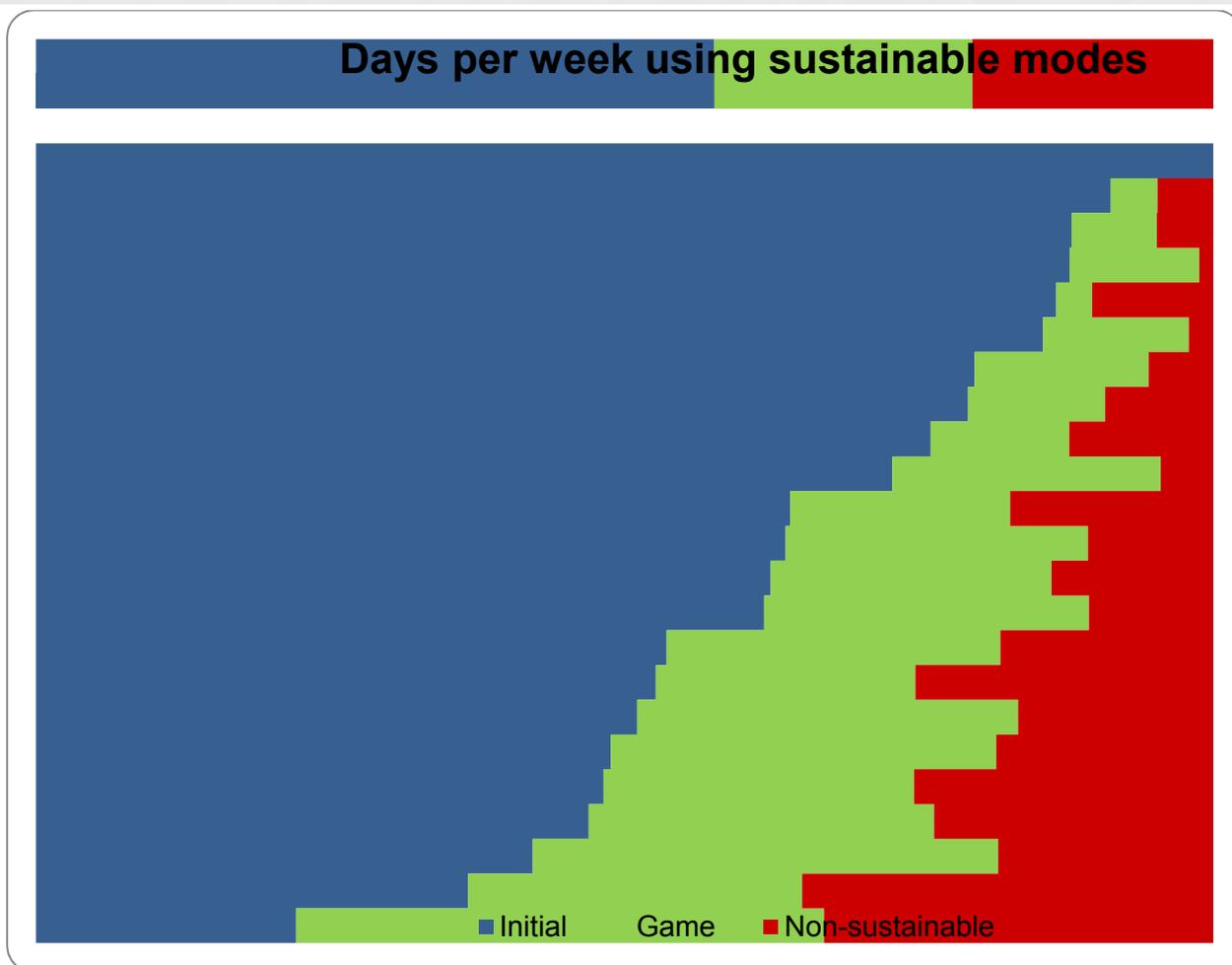


Figure 1 – Days per week using sustainable modes

This behaviour change translates into concrete benefits for the society, the organisations and the employees.

- The average reduction of CO2 emissions among players, weighting for travel distances, diminished by 39%.
- Additional calories (a proxy for health improvements) were burnt in each game by a rate of around 24%.
- If the reduction in car use obtained in the game is extended to the whole year, and considering an average car parking cost of 800 €/year, each game played had on average saved to the organisation or individuals 9000 €/year.



## 3 Contexts of application

The implementation of From5To4 in the MOBI project has given relevant experience in understanding the factors which influence the success of the introduction of the game in an organisation. The context of the site and organisation include several influencing factors. Following from the experience in MOBI, we identify the following aspects as particularly relevant:

- Type of organisation
- Size of the organisation
- Stage of the organisation at promoting smart mobility
- Specific needs of the organisation
- Transport and accessibility supply
- Cultural aspects
- Attitudes of employees
- Enthusiasm and charisma of responsible staff
- Past involvement with green initiatives, excl. charity

### 3.1 Type of organisation

The type of organisation will have a direct influence over the company needs and main motivations. For-profit companies will be especially interested in cutting costs and increasing employee satisfaction and productivity. Consumer focused companies tend to be more sensible to their social responsibility image to public opinion, comparing to companies with corporate clients. They are also looking for high-visibility campaigns that will successfully promote their green engagement.

Local authorities have the additional motivation of setting the example to other companies and promoting a healthier lifestyle for both employees and citizens. It is also within their interest to reduce local congestion and emissions, improving the quality of life in the region, and even provide an example of realising local Sustainable mobility action plans. In order to bank on the idea of setting the example, public events and other forms of divulgation of From5To4 may be encouraged.

NGO and other environmental or transport oriented companies will be mostly concerned over the aspects of environmental benefits, external image and social responsibility. Their teams of employees are usually open-minded people, knowledgeable of the latest green innovations and trends. However, they may be especially sensitive to the possibility of failing to pass a good image in their own field.

The type of work done by the employees, namely whether they have access to computers and/or internet, will also be a decisive factor for both the company's engagement and the employees'.

### 3.2 Size of the organisation

The game requires the company to have a minimum number of employees, so that teams can be formed and there is some type of interaction between them. As such, for smaller companies it is more difficult to enter the game. While in theory this could be circumvented by creating multi-company games, where each small company represents one or more teams, it proved to be very challenging to engage companies in this type of initiative. Additionally, the tool has some limitations



– such as not allowing each organisation to see the results of the other competing organisations, or in turn not providing separate analysis for each company – that further hinder this possibility.

With larger companies there is a higher potential of adopting the game and having significant improvements. These companies have more developed corporate social responsibility and human resources policies, making them more likely to embrace campaigns such as From5To4. Large companies also have more willingness and ability to pay for eventual structural interventions. Nevertheless, engaging these companies also presents some challenges: they can be more demanding on the tools they choose, and frequently they do not have an effective way to communicate with their employees in order to engage them in the game.

### 3.3 Stage of the organisation at promoting smart mobility

Companies may be at different stages of promoting smart mobility. Depending on that stage, the role a product like From5To4 may differ significantly.

Stages of smart mobility promotion:

0. **Mobility outside radar** At the most basic stage, the companies haven't even perceived mobility to be an issue, or don't care for it. They haven't taken any actions to deal with the issue of the mobility of employees.
1. **Diagnosis** At this stage, companies are willing to or have already done a diagnosis of the mobility of their employees and their needs. They understand employee mobility as an issue that is of their concern.
2. **Actions to improve mobility** The companies might have already done a mobility plan and/or implemented a set of actions to improve the options of mobility to their employees, creating better actual physical or information conditions for them to opt for sustainable modes of mobility to work.
3. **Behaviour change** Having fully understood the benefits of smart mobility promotion, the company wants not only to provide the ideal conditions for employees to opt for any mobility alternative, but further to incentivise sustainable mobility options. Companies may want to do this for a matter of cost reduction, image or employee health, satisfaction and productivity.

For companies that have never approached the subject or that are just starting, there is a need for understanding the implications and potential benefits of having a mobility program. Implementing a plan should start with a diagnostic on the current mobility conditions (quality of public transport, parking facilities, bicycle accesses...), followed by an assessment on the employees' attitudes and mobility patterns. From5To4 can be very useful for companies at this stage, since the dynamic of the game requires employees to register their daily commuting trips, working as a powerful monitoring tool. It also makes employees more conscious of their mobility choices, allowing a more thorough evaluation on the limitations and needs of the current mobility system. In some cases, presenting From5To4 to a company may act as a wakeup call. The company will understand that mobility is an issue after all, and may want to carry out actions in the future, where asking employees to play From5To4 could be a first step to identify needs and obtain information.

Companies may be at the second stage of implementing a mobility plan, where the diagnosis has already been done, and a set of actions is triggered to ensure a more sustainable mobility. Some possible actions are installing shower facilities, creating bicycle parking or creating tools to enable carpooling. From5To4 can be a part of these actions, as it encourages employees to make smarter choices and makes them more conscious. The social interaction deriving from the game facilitates



for example the creation of carpooling schemes or the association of bike buddies. In this context, From5To4 may be applied as a communication tool to promote in a fun way the new mobility options being facilitated by the company.

If a company has already implemented a complete mobility plan, it is expectable to see some promotion of sustainable behaviours directed towards employees, leading to some behaviour changes. It is useful to assess if and how can the game From5To4 complement and enhance the existing plan. The social component of the game is especially important in these cases, as it works as an extra motivation to adopt or keep following a sustainable behaviour and it brings additional advantages in terms of company's moral and exchange of ideas.

### 3.4 Specific needs of the organisation

Different companies have different reasons to consider playing the From5To4 game, so it is important to understand what their main motivators are and act accordingly when trying to engage new companies.

#### *Getting information on employees' habits and mobility patterns*

- For companies that do not have enough information on the attitudes and habits of employees, From5To4 can help to bridge that gap.
- For companies that have conducted a survey on the mobility patterns of their employees From5To4 can provide constant detailed data flow on the mobility behaviour, incl. transport mode, daily travel routine, behavioural change (if any) due to changed transport conditions, etc.
- In countries or regions where companies are not required to have their own mobility plan, it is less likely that organisations
- For companies that do not The legislative context should also be added. For example, in Romania companies are not required to have their own transport plan, therefore are not really interested in the game as a data collection opportunity.

#### *Increasing the health and satisfaction of employees*

- From5To4 can have a very positive effect over the satisfaction of employees, by promoting alternative modes and providing an opportunity to use carpooling or trying walking and cycling.
- The shift from private vehicle to other modes represents a significant cost reduction for employees.
- Walking and cycling have tangible health effects on the health of employees. Physical exercise directly affects the levels of satisfaction and productivity, having the potential to reduce the rate of absenteeism up to 50%.
- From5To4 has evident environmental benefits, as shown by previous editions of the game, since there is an actual reduction of the number private vehicles used in the daily commuting. Being a part of this change provides a sense of satisfaction and self-confidence.
- From5To4 acts as a personal travel advisor for the employees thus supporting their decision-making regarding their travel behaviour. The coaching features of From5To4 show the employees they are not alone in their own travel behaviour change.



### *Reducing costs*

- If reducing costs is one of the company's main concerns, emphasis should be given on the possibilities brought by From5To4. By promoting alternative modes (including carpooling), there is a reduction on the number of private vehicles being used on a daily basis and consequently less parking places are needed. If parking or fuel costs are supported by the company, this shift to alternative modes can represent a significant cost reduction for the company.
- The reduction of health related costs is an additional advantage.
- From5To4 provides reliable software solution for monitoring the employees' travel behaviour – through the investment in the From5To4 tool, they are also saving from conducting regular travel surveys among the employees.
- The introduction of From5To4 in the travel decision making of the company will potentially give better grounds for choosing the company transport investments.

### *Improving internal image and communication*

- From5To4 can be used as a tool to improve the company's internal image and develop the culture of the organisation.
- A company that shows concern over social and environmental issues has happier and more loyal employees.
- The format of the game and the existence of teams work as a catalyst for interactions between colleagues. These hallway conversations not only are important for keeping the players interested and motivated in the game, but can also lead to other type of interactions that are advantageous to the enterprise. For companies that feel they have an internal communication problem, this issue should be one of the main aspects mentioned when engaging them in the game.

### *Improving external image*

- Engaging in From5To4 shows in itself a concern over social and environmental issues, which increases the company's attractiveness.
- Since the game has its own communication materials and a recognizable mascot, it makes it easier to build an external communication campaign.
- The results of the game show quite clearly its success and can send a powerful message during the communication campaign.
- The European background of the From5To4 game is a good promotional approach for the company deploying it.

### *Setting the example*

- Some companies might be interested in promoting sustainable behaviours beyond their own scope. From5To4 can be used as a promotion tool to set the example.

The most stated reason by the participant organisations for engaging in the initiative was improving corporate image / social responsibility (65% of organisations providing this as their main response), followed by boosting other measures to promote sustainable mobility (59%) and improving employee satisfaction, health and productivity (47%). 29% of the organisations also mentioned reducing parking scarcity or costs and getting information on the mobility habits of employees.



### 3.5 Transport and accessibility supply

Previous editions of From5To4 have shown that companies with good public transport accesses are more willing to enter the game, because it means employees actually have viable alternatives to driving. However, previous editions also show that, even for companies with poor public transport accesses and a high number of drivers, the game can have a high rate of participation with very positive results. In these cases employees shifted essentially to carpooling and working from home, even though walking and public transport also saw a small share increase.

When approaching companies with low accessibilities it is important to emphasize that the absence of good public transport or bicycle accesses should not be a deterrent in participating in the game by showing the results obtained by other companies in similar situations. The introduction of From5To4 should be seen as an opportunity to create mechanisms which allow employees to make smarter mobility choices, such as a carpooling scheme.

Some companies located on the outskirts of cities have shuttles or something similar that establishes the connection between the company and major transport hubs or densely populated areas. In these cases, it is necessary to evaluate if From5To4 might complement this mechanism (for example by encouraging employees that do not yet choose this option, or by promoting sustainable modes to access the shuttle's departing point) or if it would be redundant or even counter-productive.

### 3.6 Cultural aspects

Different countries and regions present different realities that should be taken into account when promoting From5To4.

Countries like the Netherlands and Denmark have a strong cycling culture, while others have only recently started to adopt cycling as a transport mode. These differences in terms of infrastructures, awareness of drivers towards cyclists and overall attitude of the population have a direct impact on the number of From5To4's players that will be willing to use the bicycle on their daily commuting. From5To4 is a tool that can support reasonable modal shift towards the mode of transport that is best for the employees.

For countries or regions where there already are several different campaigns to promote sustainable mobility, From5To4 might be seen as just yet another one with little added value. In order to avoid an overload of information and similar projects, there must be a preliminary analysis of the existing campaigns. If From5To4 does offer something that indeed none of the others projects do, the divulgation of From5To4 must be done by emphasizing those aspects.

The overall concern about green issues may be another factor influencing the decision of joining From5to4. In a society where there is a greater awareness towards these concepts, the willingness to play will be higher. On the contrary, if the car is seen as an important status symbol and public transport is poorly regarded, the willingness to adopt the game and change the behaviour will be lower. Literature shows that countries and regions with a higher economic development are more prone to show concern about environmental issues and to have a higher opinion on public transport (even though there are some outliers).

### 3.7 Attitude of employees

The attitude of employees and the willingness to play the game and actually change their behaviour is hard to predict before starting the game. Some factors such as age, education level and use of



private car may be indicative but are insufficient to get a clear picture of the willingness to change behaviour.

The SEGMENT Project developed detailed questionnaires that help clustering consumers into similar groups in terms of their attitudes towards car use, cycling, electric vehicles or wider issues such as climate change and health, which can then be used to design targeted campaigns.

### SEGMENT Groups

**Devoted Drivers** - would rather use the car and have no intention of reducing car use; think successful people use the car.

**Image Improvers** - like to drive and see the car as a way of expressing themselves; do not want driving restricted and do not want to cut down car use; are motivated by fitness – especially cycling.

**Malcontented Motorists** - do not like driving (find it stressful); want to reduce driving but still prefer the car.

**Active Aspirers** - feel guilty using their car on short journeys, so would like to cut down on car use; agree that using the bus can be quicker, but are not bus users and see lots of problems with using the bus; believe reducing their own car use will make a difference and intend to reduce car use; are highly motivated to use active transport modes, and to walk and cycle for fitness.

**Practical Travellers** - only use the car when necessary; think that cars reduce our quality of life; would much rather cycle than use the bus as it is much quicker.

**Car Contemplators** - see cars as status symbols, and believe that people should be allowed unrestricted car use; would like to increase car travel; would rather use the bus than cycle, but see lots of problems with the bus and find bus travel stressful.

**Public Transport Dependents** - do not like driving and would like to see less congestion; believe that more roads are needed to relieve congestion; think people should be allowed to use cars and would like to travel more by car; use public transport, although think that the bus is not the quickest method.

**Car-free Choosers** - do not like driving and think that cars lead to unhealthy lifestyles; believe car use should be reduced; do not think the bus is stressful or problematic; would rather cycle than take the bus.

In the ANA game, where the SEGMENT Quiz<sup>1</sup> provides an idea of the type of persons who are interested in playing the game, 56% and 26% of the participants belong respectively to the 'Malcontented drivers' and 'Active Aspirers' segments (27 answers). These are the two segments that have indeed the highest potential for behaviour change in the short term, which suggests that the game is attracting people who are more likely to switch to sustainable modes. Minority segments revealed were the 'Practical travellers' (11%) and 'Image improvers' (7%)<sup>2</sup>.

Employees more likely to play the game and actively improve their behaviour belong to the profiles of malcontented motorists, active aspirers, practical travellers and car-free choosers. As such, companies or cultures with these types of profiles have higher potential of adopting From5To4 and having interesting results.

<sup>1</sup> See the MOBI Evaluation Plan for details on the method and segments applied.

<sup>2</sup> *Feedback on MOBI results and lessons learned – Intermediate report, August 2015.*



An interesting possibility is to place the SEGMENT Quiz to the employees of an organisation before the start of the game. This allows to understand the potential of adherence to the initiative and to tailor the messages sent to employees at two stages: the initial message incentivising employees to participate in the game, whereby the choice of communication flags like *environment*, *freedom of choice*, *congestion reduction*, or *health*, may be adjusted to the predominant existing segments; the messages sent during the game, particularly the Mobi “hints”, to incentivise behaviour change.

### **3.8 Enthusiasm and charisma of responsible staff**

While the aspects of location, type of organisation, needs and values of the company play an important part in entering From5To4 and the success of the game, ultimately one of the main decisive factors is the enthusiasm and charisma of the person or team responsible for the decision.

If the person contacted by the From5To4 team is an enthusiast about environmental issues, paradigm shifts, smart cities and mobility, if, in short, they fit the segment of car-free choosers, it is more likely that they will understand the potential of the game and be interested in it. On the other hand, if they are devoted drivers or image improvers, it becomes much more difficult to convince them that the game has a valid purpose and can have very positive results. In these cases it becomes less likely that the company will adopt the game.

To minimize the effect of having unenthusiastic ambassadors, it is more convenient, if possible, to not limit the contacts within the company to only one person. If a team of people is contacted, not only is more likely that at least one of them is concerned about environmental and mobility issues but also the exchanges between the different members of the team can help foster the enthusiasm.

When dealing with ambassadors that are not green minded, greater emphasis should be given to the objective results and potential company gains (cost reduction, satisfaction increase, healthier employees) rather than the social and environmental benefits of From5To4.



## 4 Five typical scenarios

In order to choose the best strategy to approach each company, four typical scenarios were identified. These scenarios vary in terms organisation's characteristics (type of organisation, needs, stage of mobility promotion), local conditions (culture, transport supply) and ambassadors' attitude. The following table shows the features of each considered scenario.

Scenario	Type of organisation	Stage of mobility promotion	Transport supply	Needs of organisation	Local (green) culture	Attitude responsible staff
<b>1 Socially responsible consumer oriented</b>	Consumer company	High	Good	Internal and external CSR	High	-
<b>2 Industrial and car oriented company</b>	Industrial company	Low	Poor	Employee health and happiness	Low	-
<b>3 Public authority</b>	Public Authority	Low	Average	Setting the example	High	-
<b>4 Enthusiastic ambassador in low green culture</b>	Company	Low	Poor	Costs	Low	Enthusiastic
<b>5 Green mobility campaigns and initiatives</b>	Campaign / initiative	Average	Good	Soft push measures	High	Enthusiastic

**1 Socially responsible consumer oriented company** A company that fits the first scenario (consumer oriented, at a high stage of mobility planning, integrated in a green-minded culture) will likely be willing to embrace an initiative such as From5To4. One of the greatest foreseeable obstacles in engaging these companies will be the existence of competing campaigns. These organisations consider various possibilities for actions and demand quality and effectiveness of the approaches. The proven outcomes of From5To4 should be emphasised. Furthermore, organisations which have consumers as final clients are more sensible to their external social responsibility image. Greater emphasis should be given to the potential of From5To4 as a tool to improve the company's external image, which will benefit from a communication campaign having Mobi, the game's mascot, as a central element which easily attracts people's attention and sympathy, thus providing the right context to present the game's positive results (private car reduction, emissions saved, calories burned...). As more companies enter the game, the brand awareness of From5To4 and Mobi will increase, further expanding the potential of communication campaigns. Even though consumer oriented companies give greater importance to external image, the employee centred approach of From5To4 will probably still place the internal dimension as the most relevant one. Playing the game and taking actions to involve the employees will show that the company cares about their well-being and is committed to its ideals of sustainability. The social interactions deriving from the game and the healthy team competition will further intensify this feeling. Finally, a possible suitable approach in the context of companies which are at a higher stage of sustainable mobility promotion is to position From5To4 as an instrument to complement and enhance measures that the company has

already done in the field of mobility. Companies which already provide mobility facilities or services to their employees may capitalize by using From5To4 as a means to increase their uptake.

**2 Industrial and car oriented company** A company that fits the second scenario (industry oriented, with low concerns over environmental and mobility issues, less sensitive to public image) may not immediately see an interest in engaging in From5To4, since the approach may be strange to the company's practices. When approaching these companies, greater emphasis should be given to the benefits for the employees and how that relates to their productivity, as well as (if applicable) the potential cost reduction for the company. By suggesting walking and cycling as a means to travel to work, Mobi will motivate employees to be physically active, directly impacting their physical and mental health. It is important to mention that studies show that this can help reduce the absenteeism rate up to 50%, thus directly increasing the company's productivity. Additionally, the team dynamics and the competition aspect of the game will provide a context to new social interactions, strengthening or creating new bonds and improving the company's moral. Finally, From5To4 will help employees reducing their mobility budget thus allowing it to be allocated to more fulfilling areas. On the cost side, the ambassadors should be made ready to present the potential savings for the company to their administrations in the cases where companies have mobility associated costs such as maintaining parking facilities, mobility subsidies, etc. In this scenario, where the conditions for using alternatives to car are not comparably favourable, and the companies have not yet taken significant measures to improve those conditions, the companies might have constraints in asking their employees to change their modal choices. However, previous editions of the game have shown cases in this situation where the initiative nonetheless achieved a relevant participation by employees and a significant reduction of private car use. In the context where the remaining alternatives are limited, the carpooling option may be highlighted as a mechanism to combat the lack of alternatives and promote better bonds between employees.

**3 Public authorities** The third scenario relates to public authorities or other entities such as local associations that intend to promote sustainable mobility in their region. Their objective in playing From5To4 is not only reducing their own footprint but also setting the example by "practising what you preach" and simultaneously mobilizing their employees around such goals and inspiring other organisations and individuals to take sustainable mobility be more environmentally friendly. The effects of reduction in congestion and emissions and increase of quality of life in the region should be emphasised and feature a strong external communication. When approaching these entities, it is important to focus on the results of previous editions, so that the potential of the game as a catalyst to induce change and obtain positive outcomes is fully understood. Some emphasis should be given to the visual identity of the project, which helps building a strong and recognizable communication campaign. The process of engaging these entities should thus be coupled with a strategy of public promotion of the game, in order to take advantage of their need to set the example. Other existing initiatives, such as the European Mobility Week, provide a good context to promote and launch From5to4.

**4 Enthusiastic ambassador in low green culture** In the fourth scenario there is an ambassador within the approached company who is enthusiastic about environmental and social matters, even if the local culture is not yet tuned with green oriented culture and initiatives. An initiative like From5To4 will therefore be a novelty with the potential to realize a good surprise and a change in the company's related practices. The local ambassador will be the pivot who can use From5To4 as an instrument to trigger such a change in the company. In these cases the challenge will not be convincing the ambassadors to join the game, but helping them convince the administration to embrace the initiative. A first approach should rely on presenting to the board the benefits of the game, highlighting those related to the company's productivity (cost savings, employee satisfaction, improving social



interactions and raising the company's moral). A second approach should rely on the ambassador's inside knowledge of the company. The Mobi team should help the ambassador to devise a strategy in terms of team formation, communication methods and prizes to give, in order to gather enthusiasm amongst employees, in a bottom-up scheme to engage the administration.

**5 Green mobility campaigns and initiatives** These types of events can be a good opportunity to distribute the game – they doubly enhance the green image of the event and the game and have the potential to reach many people/companies. These events can also provide an opportunity to involve companies and players in a small scale games for which they get prizes, working as a preview for the game.



## Annex I – Cases of application

<b>ANA Aeroportos de Portugal, Portugal</b>	
I. Type and size of organisation	ANA is the airport manager of the main Portuguese commercial airports. It has recently been privatised, therefore it is a profit oriented company with some concerns for its public image. It has a staff of 1200 employees throughout 5 different airports. From5To4 included participants from all the five sites.
II. Stage of sustainable mobility promotion in organisation	<p>By the first contact with the organization, it was at a basic stage of employee sustainable mobility promotion. It had no specific facilities or services for sustainable options like cycling or carpooling. It had not performed an objective diagnosis of the needs of the employees.</p> <p>However, the ANA responsible staff saw the application of From5To4 not only to carry out a social responsibility action for image purposes, but also as an opportunity to raise the issue of employee mobility within the organization as a way to realize further actions in the future.</p>
III. Specific needs of the organisation	ANA's main driver was social responsibility. It was interested both in the external and internal dimension to it. At the external level, ANA was keen to publicly report the results of the game. Internally, the initiative was seen as an opportunity to raise employee satisfaction. The final event of the initiative, with the attribution of awards to the participants, counted with members from the administration.
IV. Transport and accessibility supply	The transport supply varies with the locations, but the two most important locations (Lisbon airport and Porto airport) have reasonable quality of public transport supply, with both being served by metro and several bus lines. In the case of Lisbon, the walk from the public transport facilities to the company's headquarters is not inviting to users, which is a negative point. None of the sites include connected infrastructure appropriate for cycling or a carpooling platform.
V. Cultural aspects and attitudes	<p>The issue of sustainable mobility to the workplace is still a minor concern to most population in the context of Portugal. It is not an issue that rings on most people's minds. ANA's communication to its staff put a lot of emphasis on contributing to a more sustainable world and also for personal health issues.</p> <p>The average age of the ANA staff is relatively high, which might explain the higher predisposition to change towards carpooling in relation to other modes.</p>



	<p>A Segmentation Quiz was made to assess the players' attitudes towards mobility. The results have shown that 56% and 26% of the participants belong respectively to the 'Malcontented drivers' and 'Active Aspirers' segments, which are the profiles that have the highest potential for behaviour change. Minority segments were the 'Practical travellers' (11%) and 'Image improvers' (7%). No participants belong to the remaining categories, including the 'Devoted drivers' segment or any of the carless segments. As a whole, it could be said that the participating players were people interested in sustainable mobility and willing to change behaviour.</p>
<p>VI. Enthusiasm and charisma of responsible staff</p>	<p>The energy of the ANA staff responsible for implementing From5To4 was key success factor. The staff members were individuals who were naturally concerned for the sustainable mobility issue and saw From5To4 as an opportunity to raise awareness in the organization. Their persistence and popularity significantly influenced the ability to obtain the interest by players. In the end they organized an awards event with a highly positive atmosphere which guaranteed that the initiative was internally seen as a success.</p>
<p><b>Potential and Approach</b></p>	<p>The main characteristics of ANA which defined it as a priority target were the large size of the organization (which was the target defined in Portugal) and the fact that it showed external signals of giving priority to social responsibility issues. ANA was contacted directly requesting for a meeting to present From5To4.</p> <p>Since it was not possible for the company to share data on employees, the approach to potential players was done by ANA via an email requesting for registration and team definition. Given that not all registered employees made their own teams, the ANA staff defined the remaining teams based on their own criteria.</p>
<p><b>Outcomes</b></p>	<p>The game had the participation of 43 active players, where 65% were very active (filling in at least 80% of the days).</p> <p>The game really produced a behaviour change. On average, each player did travel sustainably in one more day of the week. The share of sustainable trips passed from a baseline of 54% of trips to 76% during the game.</p> <p>The preferred sustainable mode of transport was carpooling, increase from a share of 15% to an impressive 34%. Walking also increased significantly, from 9% to 13%.</p> <p>By the end of the game, 1,5 tons of CO2 had been saved.</p>

	One month after the end of the game, 54% of the players reported to have significantly increased the utilization of some form of sustainable mobility.
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<b>Uzana EcoGreen Festival, Bulgaria</b>	
I. Type and size of organisation	<p>Uzana EcoGreen Festival is an annual event, with more than 100 exhibitors and visited by more 2 500 people. The participating exhibitors are green-oriented companies, NGOs, local initiative groups, etc. The festival provides them with 3 days of networking opportunities, seminars and conference appearances, exhibition and demonstration possibilities, etc.</p> <p>The Energy Agency of Plovdiv is among the exhibitors in the festival days having a stand with informational and demonstration materials in the field of sustainable energy, environment and climate.</p> <p>The organizers of Uzana EcoGreen Festival and the Energy Agency of Plovdiv partnered in piloting the From5To4 game among the participants and visitors. The aim of the organizers was to increase the involvement of all participants in the festival in the climate change issues as well as to show practically how their travel behaviour affects the environment. In addition, the organizers wanted a “buzz” event for the festival that will keep the participants interested in the event and highly motivated to keep up with it. The From5To4 game was arranged for 2 months prior the festival in 2015 and was widely distributed on the festival website and social networks.</p> <p>A total of 117 exhibitors participated. An award ceremony was arranged for the winners in the From5To4 game. The winners were determined based on their profile points in the system. The decision was made based on the understanding that people relate easily to the points and any other criteria or recalculation of the result would bring in confusion and distress.</p>
II. Stage of sustainable mobility promotion in organisation	<p>The Uzana EcoGreen Festival was at the stage of diagnosing the mobility patterns of the festival participants. Due to the location of the festival (high in the mountains), the organizers had to arrange additional transport options for the participants. The Energy Agency of Plovdiv consulted them on how to proceed and evaluate the demands of the participants.</p> <p>The festival organizers established partnerships with sustainable transport services to provide to the participants – carsharing and carpooling service, shuttle bus to the festival site, promoted biking.</p>



<p>III. Specific needs of the organisation</p>	<p>The Uzana EcoGreen Festival needed a good solution that will tell them the modal split of the participants and calculate their CO2-footprint related to their trip to the festival and back.</p> <p>In addition, they were looking for a “buzz” supporting event that would be easy to manage and promote among the participants and visitors. They also wanted it to keep high motivation for participation in the festival, increase the interest in the festival events and keep the audience amused with a diversity of festival events.</p>
<p>IV. Transport and accessibility supply</p>	<p>The Uzana EcoGreen Festival is traditionally conducted in Uzana District in Bulgaria which is a mountainous site, with limited transport options – a few shuttle buses and personal vehicle.</p> <p>The organizers of the festival were aware of the preference for personal car use, so they wanted to provide other options for travel in line with the green concept of the festival.</p> <p>EAP supported them in their choice of carsharing/carpooling service and increasing the number of shuttle buses; and promoting green biking.</p>
<p>V. Cultural aspects and attitudes</p>	<p>The participants in the festival are predisposed to using sustainable transport in their daily routine; they understand the benefits of increasing the share of walking and biking in their daily routine.</p>
<p>VI. Enthusiasm and charisma of responsible staff</p>	<p>The organizers of the festival were particularly active on distributing information on the game provided by EAP.</p>
<p><b>Potential and Approach</b></p>	<p>EAP prepared a media start-up package with information and visuals on the game to be published on the websites and social media of the Uzana EcoGreen Festival. An invitation e-mail was sent to all participants in the festival giving them information on the From5To4 initiative, its objectives, terms of participation and awards. The list of participants was imported in the system upon their agreement to participate.</p> <p>In 2015, the From5To4 game continued for 2 months prior the festival and the winner was awarded during the grand closing of the festival. In the meantime, updates and news on the game were promoted from the festival stage.</p>
<p><b>Outcomes</b></p>	<p>A total of 117 participants registered.</p>

<b>Public authority, Bistrita, Romania</b>	
I. Type and size of organisation	<p>Bistrita municipality was the first Romanian municipality using F5T4 among employees, showing local authorities' commitment to better employee satisfaction, health and productivity, as well as its commitment to the environment.</p> <p>60 employees (out of a total of 674 employees), divided into 6 teams, played F5T4 during July 2015 - January 2016. Bistrita started playing MOBI Monday, July 20, 2015<sup>3</sup>.</p>
II. Stage of sustainable mobility promotion in organisation	<p>Bistrita municipality was at the stage in which already started taking actions to improve mobility and started the development of a Sustainable Urban Mobility Plan.</p> <p>Bistrita municipality was also one of BUMP project pioneer cities<sup>4</sup>, meaning that it was one of the best performing cities of the BUMP Project, well ahead in the development of its SUMP and ready to welcome technical officers and decision makers from other local authorities to learn from its experience.</p>
III. Specific needs of the organisation	<p>As a local authority Bistrita was interested in promoting sustainable behaviour beyond its own scope and had the additional motivation of setting the example and promoting a healthier lifestyle for both employees and citizens.</p> <p>It was also within their interest to reduce local congestion and emissions, improving the quality of life in the city.</p> <p>In order to bank on the idea of setting the example, Bistrita municipality got involved in several public events and also promoted F5T4. For example, during the European Mobility Week 2015 in Bistrita municipality, MOBI was present at the Cyclists Tour organized within the event.</p>
IV. Transport and accessibility supply	<p>The city of Bistrita is located in the North-West of Transylvania plateau, in the depression of Bistrita, numbering a population of 75.076 inhabitants.</p> <p>The city is equipped with modern road structure. There are 14 local public transportation routes, summing up about 200 km, with 155 stations.</p> <p>Bistrita Municipality is not crossed by any railway artery, but this is only 15-20 km far away.</p>

<sup>3</sup> <http://www.abmee.ro/wp-content/uploads/2015/05/Newsletter-nr.-2-2015.pdf>, accessed on January 12th, 2016

<sup>4</sup> <http://www.bump-mobility.eu/4113.aspx>, accessed on January 12th, 2016



	The closest airports are in Târgu Mures City, 100 km far, and Cluj-Napoca, 120 km far <sup>5</sup> .
V. Cultural aspects and attitudes	<p>Following the first implementation assessment of F5T4 in Bistrita, it was shown that employees had an initial (baseline) usage of sustainable modes of 85%. Therefore employees at Bistrita were already using sustainable transport in their daily routine.</p> <p>During the game, 98% of the trips were done using sustainable modes. This shows a real concern about environmental issues and a positive opinion on public transport and sustainable mobility.</p>
VI. Enthusiasm and charisma of responsible staff	The person responsible for F5T4 implementation in Bistrita is very enthusiastic about environmental issues, smart cities and mobility, and has understood the potential of the game. It was this person's idea to further promote MOBI project and F5T4 to other public institutions in Bistrita during the European Mobility Week 2015.
<b>Potential and Approach</b>	<p>ABMEE approached Bistrita municipality through OER – Romanian Energy Cities Network.</p> <p>Bistrita is one of the 34 member municipalities of OER, active in the field of energy efficiency and sustainable planning and interested in promoting sustainable mobility in their region.</p> <p>The strategy was that of approaching the following needs of public authorities:</p> <ul style="list-style-type: none"> <li>• setting an example by “practising what you preach”</li> <li>• mobilizing employees and citizens around sustainable mobility and more environmentally friendly transport modes</li> <li>• reduction in traffic congestion and emissions</li> <li>• increase the quality of life in the region</li> <li>• strong external communication through visual identity of MOBI character, which helps building a strong and recognizable communication campaign.</li> </ul> <p>As for the involvement of the employees, the top-down approach was used, meaning that after agreeing to get involved, the list of participants was mostly decided by the management and less by voluntarily involvement of employees.</p>

<p><b>Outcomes</b></p>	<p>The engagement of the organisation was successful. All 60 employees involved registered and entered the game.</p> <p>59 of these employees had more than 80% working days filled into F5T4.</p> <p>Following the first implementation assessment of F5T4 in Bistrita, it was shown that employees had an initial (baseline) usage of sustainable modes of 85%. By the time of the first implementation assessment they reached 98% usage of sustainable modes.</p> <p>The car usage went from 15% to only 2%, while carpooling was the main alternative used.</p> <p>An unexpected strong competitive spirit has sprung between teams, who really got involved in the completion and tried to gain as many points as possible within the game.</p> <p>Moreover, given the fact that MOBI and F5T4 were well received by the organisation and by the employees, Bistrita municipality promoted MOBI towards other public institutions during the European Mobility Week 2015.</p> <p>As a result a new multi-company game was set between 5 public institutions in Bistrita city, where each organisation represented one team of 10 participants. The following institutions got involved:</p> <ul style="list-style-type: none"> <li>• Chamber of Commerce</li> <li>• Environment Protection Agency</li> <li>• Public Health Department</li> <li>• Environmental Guard</li> <li>• Bistrita municipality (an additional team of 10 players was established within Bistrita municipality to play against the other public institutions).</li> </ul> <p>These institutions started playing F5T4 – the Mobility Game, Monday, September 28th, 2015.</p>
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<b>Cera, Leuven, Belgium</b>	
I. Type and size of organization	<p><a href="#">Cera</a> is a cooperative association with 40 employees inspired by the cooperative values of FW Raiffeisen. Together with some 400,000 associates they invest in the well-being and the welfare of our society. By joining forces they create economic and social added value in three areas:</p> <ul style="list-style-type: none"> <li>• a major shareholder for strong fundamentals of the KBC Group</li> <li>• positive impact in our society</li> <li>• unique advantages for the associates</li> </ul>
II. Stage of sustainable mobility promotion in organization	<p>Mobility was not on the radar of the organisation before Mobi introduced its challenge. Some employees were aware of sustainable commuting but it was not promoted internally. The management did not have an idea of the modal split of the company, but was looking for a way to gather relevant information on the mobility of its employees.</p>
III. Specific needs of the organization	<p>The Cera management was looking for:</p> <ul style="list-style-type: none"> <li>- information on the mobility patterns of employees</li> <li>- a way to promote a more sustainable modal split</li> <li>- some team spirit activity between employees</li> </ul>
IV. Transport and accessibility supply	<p>Cera is situated in the centre of the city of Leuven, and very well accessible by car, bike, bus and train: there is a big underground parking where has several free places for its employees, and a bike parking. The railway station is just a 10 minute walk from the offices and several bus lines stop at 100 meter.</p>
V. Cultural aspects and attitudes	<p>Cera is a member of the organisation “Leuven Climate Neutral in 2030” and really wants to contribute to the according campaign by working on a modal shift of its employees (and communicate about it).</p> <p>The Segment Quiz was filled in by 10 employees and showed that 75% of them were practical travellers, 17% devoted car drives and 8% malcontent motorists.</p>
VI. Enthusiasm and charisma of responsible staff	<p>Participation at F5T4 was launched on the demand of the general director (a devoted cyclist) and enthusiastically supported by the communication team. They all made up a team and were very active during the F5T4 campaign.</p>
<b>Potential and Approach</b>	<p>The game was presented at an internal HR meeting with all employees present, by somebody from the F5T4 team. The general director made his engagement clear, set out the benefits, promised nice prizes and invited all to take up the MOBI challenge with him. The game period was at the same</p>

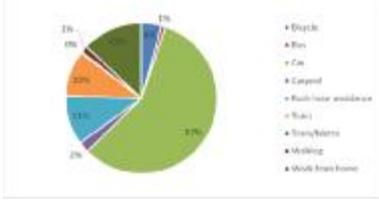
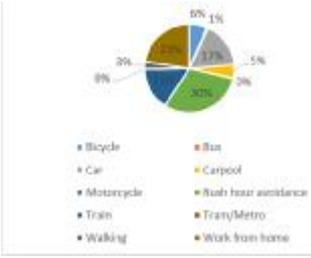


	<p>time a trial period for the first (official) homeworking procedures.</p> <p>The objective was set on a 60% participation rate or 25 participants divided in 3 teams. Game period : 6 weeks from 25/09/2015 till 31/10/2015.</p> <p>Employees subscribed individually and teams were set up by the F5T4 team based on distances to work and gender equality.</p> <p>During the game period the communication team provided a weekly message from MOBI, either online on the intranet or offline on the posters. They launched an Avatar Quiz and a Mobi selfie contest. A mid-term newsletter was sent out to give a boost for the final weeks of the battle.</p>																														
<p><b>Outcomes</b></p>	<p>The game was played by 25 employees and they adhered till the end of the game period. They were all really positive about the game, although they did not always understand the figures on the dashboard.</p> <p>They reached the F5T4 challenge: 26% less car trips during rush hour. Per modus the results read as:</p> <table border="1" data-bbox="630 1048 1350 1594"> <thead> <tr> <th></th> <th>before</th> <th>after</th> </tr> </thead> <tbody> <tr> <td>Car</td> <td>44%</td> <td>19%</td> </tr> <tr> <td>Avoid rush hour</td> <td>4%</td> <td>16%</td> </tr> <tr> <td>Bike</td> <td>16%</td> <td>26%</td> </tr> <tr> <td>Foot</td> <td>12%</td> <td>12%</td> </tr> <tr> <td>Home work</td> <td>4%</td> <td>7%</td> </tr> <tr> <td>Scooter</td> <td>4%</td> <td>3%</td> </tr> <tr> <td>Train</td> <td>14.5%</td> <td>13%</td> </tr> <tr> <td>Bus/tram</td> <td>0%</td> <td>3%</td> </tr> <tr> <td>Carpooling</td> <td>0%</td> <td>1%</td> </tr> </tbody> </table> <p>In the 6 weeks they cycled 2254 km and avoided 1.9 ton CO2. All participants got a prize, as well as the winning team.</p> <p>One small remarks: they thought that the use of electrical bike should be mentioned separately.</p>		before	after	Car	44%	19%	Avoid rush hour	4%	16%	Bike	16%	26%	Foot	12%	12%	Home work	4%	7%	Scooter	4%	3%	Train	14.5%	13%	Bus/tram	0%	3%	Carpooling	0%	1%
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<b>Capgemini, Utrecht, The Netherlands</b>	
I. Type and size of organization	<p>Capgemini is one of the world's foremost providers of consulting, technology, outsourcing services and local professional services. Present in over 40 countries with more than 180,000 people, the Capgemini Group helps its clients transform in order to improve their performance and competitive positioning.</p> <p>For this project the Capgemini location in Utrecht (headquarters The Netherland) was chosen. Also out of their role as frontrunner in U15 initiative on mobility management in Utrecht.</p>
II. Stage of sustainable mobility promotion in organization	<p>Capgemini has a very complete package of sustainable services and arrangements for its employees. Being for a large part a consultancy firm and located near the highway, the car is still very dominant in commuting.</p> <p>The management did have a rough idea of the modal split of the company, but this was on yearly basis, not so much in detail as MOBI offers.</p>
III. Specific needs of the organization	<p>Capgemini was looking for new and innovative ways to measure and promote the (existing) arrangements and services within company.</p> <p>Especially the 'social' factor of the game because current situation is rather individual. Also promotion of train and avoiding rush hour was focus for this project.</p>
IV. Transport and accessibility supply	<p>Capgemini located near highways and accessible – but less attractive than car for most – by public transport and bike. The car is necessary for running the consultancy business so the campaign should clearly not be anti-car.</p>
V. Cultural aspects and attitudes	<p>The dominant culture is men's middle age consultancy so pretty car oriented (88% men, 12% woman). As most of the consultancy staff has a lease car. There are some other groups involved like HR and Communication and Service Desk.</p>
VI. Enthusiasm and charisma of responsible staff	<p>Participation at MOBI was launched on the demand of the general director (president of U15 group of 15 frontrunner companies in Utrecht) and supported by the mobility expert who was very experienced in mobility management. He did not want to push and distract the people but gave the game a good chance to learn from.</p>
<b>Potential and Approach</b>	<p>The game was chosen out of a selection and presented at an internal HR meeting by somebody from the F5T4 team.</p>



	<p>Participation was all voluntarily and not promoted by higher management. The choose bottom up approach.</p> <p>The objective was set on at least 40 participants reaching 20% more sustainable commuting.</p> <p>Game period was 12 weeks from April till June 2014.</p> <p>Employees subscribed both individually and in teams. During the game period the communication team provided two times a message from MOBI, either online on the intranet or offline on the posters. A mid-term newsletter was sent out to give a push to participation.</p>
<p><b>Outcomes</b></p>	<p>The game was played by 70 employees and 39 completed all the required data including a before and after survey for additional information.</p> <p>They were positive about the game, although they had some comments for improvement as including tracking and tracing.</p> <div style="display: flex; justify-content: space-around;">   </div> <p><i>Modal split before and during game</i></p> <p>53% of the participants reached their target of improving by 20%, 19% improved, but did not reach the target and 28% did not improved.</p> <p>An extended analysis is available based on the before and after survey. 2 out of 3 participants would recommend the game at other companies.</p>